Life Cycle of a Project: How to Plan for Performance Improvements

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Many HIM professionals are finding project management in their job descriptions. This excerpt from AHIMA's textbook, Quality and Performance Improvement in Healthcare: A Tool for Programmed Learning, *provides a closer look at the phases of a project.*

When a performance improvement (PI) program is initiated, the project requires a project team to be responsible for formulation and implementation of the program. Thus, to perform effectively, PI team members need to develop project management skills.

PI projects in modern healthcare organizations range from small efforts involving only a few departments to larger ones that affect the organization in very significant ways. Healthcare professionals are likely to be assigned to project teams and in some cases may be responsible for leading them.

Project Life Cycle

The length of time a project will take over its entire life cycle varies depending on the scope and size of the project. Large building projects may take months or years, but most projects will last from a few weeks to a few months. The life cycle of a project is composed of several phases and the number of phases and their definitions vary depending on who is outlining the phases and the industry involved. Most projects range from four to six phases.

A Guide to the Project Management Body of Knowledge (PMBOK Guide), updated in 2000 by the Project Management Institute (PMI) Standards Committee, compares several life cycle phases representative of different industries. Some experts in the field of project management have chosen to focus on a series of processes from the *PMBOK Guide* that groups project management processes into four life cycle phases: initiation, planning, execution (implementation), and closure.[1,2] These four phases are appropriate for projects in service industries such as healthcare delivery.

Initiation

The initiation phase begins with the determination that there is a gap between organization performance and expected outcomes. The leadership then identifies an opportunity for improvement and assesses the feasibility of the project.

Sponsorship

One or more individuals in an organization normally sponsor a project. The personal commitment a sponsor brings to a project coincides with the degree of empowerment a project manager will have. Sponsorship by top leadership, therefore, must be characterized by commitment and clear articulation of expectations.

Team Member Selection

Leadership will select members for the project team and identify any other resources needed to complete the project. Selection of team members should be based on the identification of individuals who possess a variety of skills and expertise. If all project team members are selected from the same department with similar experience and skills, the team runs the risk of overlooking viable alternative solutions that might be raised in a team with more diverse experience and skills. Organizational leadership

usually completes much of the initiation phase. Preliminary definitions of the project objectives, activities, and expectations are prepared. Once formed, the team refines these processes.

Mission Statement

If a mission statement has not been articulated by leadership, the project team needs to establish one as a first priority at the beginning of the team's life cycle. A clear mission and vision statement will serve as a guide in the development of objectives and goals.

Project Teams

Once a project team has been formed, project management steps similar to the cycle of team PI processes are followed. There are seven steps in the cycle of PI team processes:

1. Identify an improvement opportunity
2. Research and define performance expectations
3. Design and redesign process/education
4. Implement process/education
5. Measure performance
6. Document and communicate findings
7. Analyze and compare internal/external data

A project progresses through a series of steps from one phase to the next. "The Performance Improvement Process Cycle," below, lists the processes that each of the four phases include. These steps parallel the process steps found in the phases of a project.

Team Group Dynamics

Although a project life cycle is often defined by phases, the project team will go through a series of stages and adjust at various times through the phases of the project. The project team leader and members will be better prepared to complete the project if they understand the group dynamics of team development. A newly formed team will normally go through all stages of team development, regardless of how well the members have known one another.

Models of team development uniformly define four stages of progression:[3]

Cautious affiliation: This is the forming stage, in which team members tend to be very polite as they get to know one another. This is also a time in which the team members assess each other's strengths and weaknesses

Competitiveness: This is the storming stage, in which conflicts emerge. Without effective leadership and the ability to resolve conflicts, it is difficult for teams to get past this stage. They will either stay in conflict or revert back to phony politeness. Regardless of how they react, the productivity of the team is limited during this stage

Harmonious cohesiveness: This is the norming stage, in which team members learn to communicate and collaborate. They become more focused on the task at hand. Members begin to feel that they are a contributing part of the team. They also begin to establish rules of engagement with one another

Collaborative teamwork: This is the performing stage, in which a group of individuals begins to collaborate as a team. Team members come to understand group norms, and communication becomes more efficient and effective. In highly effective teams there is less conversation and more action. Individuals take pride in the results produced by the team

The team leader needs to be prepared for the natural shift in the dynamics of a group as it matures and be able to facilitate team development. Team leaders should allocate time for forming, storming, norming, and performing every time the team meets.[4] This progression of stages is not necessarily linear. Even though a team has matured to norming or performing, events may occur that cause the team to revert to storming.

Allotting a few minutes at the beginning of each meeting to "check in" can help to move the team along toward greater maturity. Checking in can be as simple as asking each team member to tell the team what he or she is prepared to bring to the meeting for the day. If there is a change of even one team member, the team returns to the forming stage and the progression through the four stages begins again.

Some authors add a fifth stage to this process, called adjourning. Adjourning marks the dissolution of a group. If handled appropriately, it provides positive closure for the team members. This is a time to celebrate successes and recognize team member contributions and accomplishments.

Leadership

Situational leadership is a useful model for understanding and leading project teams.[5] When a team leader understands which level of maturity his or her team has reached, he or she can select an appropriate, effective leadership style. The team leader should be more task oriented and directive with newly formed groups, and more relationship oriented and supportive of team members as they mature.

The project team leader is usually an employee from a functional area of the organization who is assigned responsibility for leading the team to completion of a project. This may put the leader in a position that divides attention and loyalty between the project team and the parent organization if the vision, goals, and objectives of the two are not aligned. A key role for the team leader is to bring these three elements into harmony.

Planning

Organization leadership should make clear to the project team members the importance of the project and the expected impact on the organization. However, once objectives for the project are established, the team should feel free to proceed without interference from leadership. Periodic feedback through reports and briefings can be scheduled to keep leadership informed about the progress of the project.

A critical element of the planning phase is the identification of final system requirements or criteria that sets standards for measuring success. Without these standards in place, determining whether or not a project has succeeded becomes difficult.

Design

The most important contribution team members can make during the design phase is the development of alternative solutions. If the organizational culture truly embraces PI and problem solving, a team will be able to develop alternative solutions and work through a step-by-step process of deciding which alternative is the optimal solution.

As alternatives are developed and discussed, the cost of implementing a recommended solution should be considered. Costs should be divided into two categories: fixed and operating. Fixed costs are one-time expenses associated with buying new equipment and getting started. Operating costs are incurred to sustain the project on an ongoing basis.

Once the team decides to recommend an optimal solution, it needs to develop a schedule for implementation. This is a critical element of the planning function in project management. Planning must identify tasks, their duration, and who will be responsible for them.

Planning and Tracking Tools

An effective tool for planning and tracking the implementation of a project is the Gannt chart. The Gannt chart is often used by PI teams to plan and track progress of a project.

If a more quantitative approach is required, the Program Evaluation and Review Technique (PERT) may be used. This is also called Critical Path Method (CPM). PERT provides a structure that requires the project team to identify the order and projected duration of activities needed to complete a project. The most helpful element of PERT is that it identifies those critical activities that must be completed on time in order for the entire project to meet its final deadline.

PERT charts depict a network of activities represented by arrows, as shown in "Sample PERT Chart," below. The numbers above the arrows represent time required to complete the activities. Duration time is usually measured in days or hours. To construct a PERT chart, the PI team must identify all activities required and determine which activities precede one another. The letters below the arrow represent the activity. The circles, called events, represent the beginning of an activity.

sample PERT chart
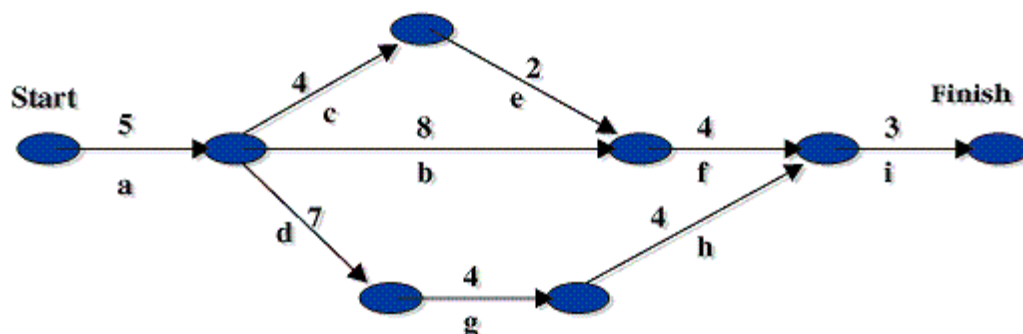
PERT charts depict a network of activities represented by arrows. The numbers above the arrows represent time required to complete the activities (in days and hours). The letters below the arrows represent the activity. The circles represent the beginning of an activity.

Some activities may be concurrent. These are called parallel activities. By following any path of arrows through the network from start to finish and adding the duration times of each activity, one can determine the total amount of time that series of activities will require. The path with the greatest total duration time is called the critical path and represents the shortest amount of time required to complete the total project. The critical path in the PERT diagram is the sequence *a-d-g-h-i*, which will require 23 days.

PERT and Gannt charts both require the planner to identify critical tasks, the duration of each task, and the expected completion dates. This scheduling process usually includes costs associated with tasks and the resources needed to complete them.

Execution

Once a plan is completed, execution (or implementation) begins. This is where installation of equipment or construction begins and any policy or procedure manuals should be prepared for distribution. Specifications that may have been developed in the design phase should be finalized. Any new systems or processes should be tested for performance.

Individuals involved in implementation and continued operation of a new or reorganized system need training. Thus, the implementation plan should include training and identification of who will be trained. The training portion of the implementation plan should identify the content of the training, training objectives, and expected outcomes.

Closure

In closure (stage four of project management), the new system or process is used by the customer. This is the phase in which the project shifts to become an integrated part of organizational operations. During the operational phase, management must continually monitor performance and determine whether or not it is meeting established performance criteria.

Evaluation and Control

As a project shifts from planning to execution to closure, testing performance results against finalized standards must not be ignored. Too often, this is where the organization can become distracted with other issues or new events and not follow up on the success or failure of the project. This is one reason why a project can fail.

The project becomes the standard way of doing things in the closure phase. Team members return to their functional roles or move on to newly assigned roles if the project is one that changes their old functional roles. This is the phase in which lessons

learned are cataloged and documented. As the established project continues, it must be continually evaluated to determine if performance is meeting established criteria and standards. During the process of evaluating results and outcomes, the organization looks for new improvement and innovation opportunities. When a new opportunity for PI is identified, a new project is initiated.

Why Projects Fail

The Center for Project Management publishes seven deadly sins of project failure on its Web site:

1. Mistaking half-baked ideas for viable projects
2. Dictating unrealistic project deadlines
3. Assigning underskilled project managers to highly complex projects
4. Not ensuring solid business sponsorship
5. Not monitoring project vital signs
6. Failing to develop a robust project process architecture
7. Not establishing a comprehensive project portfolio

Some of the sins are self-explanatory. Failure regarding solid business sponsorship places responsibility squarely on senior leadership of an organization. As mentioned earlier, executive-level commitment and support of a project is critical to its success. Without the backing of leadership, implementing a new project will be difficult if not impossible, because of the natural resistance to change that occurs in most organizations.

Developing a viable project process shows that the organization has developed guidelines for standardized and repeatable processes of beginning and completing projects. Project team leaders should not have to start from scratch with each new project.

A comprehensive project portfolio consists of a set of files organized into at least six areas, which leadership and project team leaders are able to reference. The portfolio should include a file of ideas, charters (or proposed projects), projects in execution, completed projects, suspended projects, and cancelled projects. With this collection of information, a project manager can compare their project to past successes and failures and other activity going on throughout the organization.

It is also just as important to plan and organize a team for success as it is to avoid those things that lead to failure. Following is a list of six key steps that can lead to a winning strategy:[6]

- Organize for success
- Create a project plan
- Develop a means to track performance to plan
- Implement the plan
- Train and retrain if necessary
- Anticipate and prepare for the culture shock associated with change

Getting organized and having a well-conceived plan in place is key. To know if the project is progressing satisfactorily, the team needs to put a monitoring system in place that measures success criteria against outcomes.

The last step of the six keys cannot be ignored. It is a natural force in humans and organizations to initially resist change. Leadership must be prepared to effectively counter resistance and continue the process of implementation and improvement.

As mentioned earlier in this chapter, some organizations are more receptive to change than others. The organization's leadership, project sponsors and team members must champion the project and be persistent in seeing it through to full implementation.

The Performance Improvement Process Cycle	
Phases	**Process (Steps)**

Initiation	1. Identify a performance improvement opportunity 2. Determine feasibility of the project 3. Define project objectives and scope 4. Select team members 5. Create vision and mission statement
Planning	6. Identify the activities (tasks) the team will perform and estimate the duration of activities 7. Develop final system requirement and criteria for standards of success 8. Develop a schedule and cost estimates 9. Perform tasks and track progress
Execution (Implementation)	10. Present recommendations to leadership 11. Execute implementation plan 12. Begin training 13. Track and monitor progress 14. Revise project as needed
Closure	15. Communicate results (final report). 16. Celebrate successes. 17. Continue evaluation and control and identify new opportunities for improvement

Notes

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